

AMENDMENTS TO THE CLAIMS:

Amendments to the Claims are made such that additions are underlined (_____), while deletions are in the strikethrough format, or double bracketed ([]) where strikethrough format would not adequately show the deletion.

This listing of claims will replace all prior versions and listings of claims in the application. The current status of claims 1-62 is as follows:

1. – 36. (Cancelled)

37. (Currently Amended) A docking system comprising:

a docking station for location on a surface, the docking station configured for accommodating a robot in at least a docking engagement, the docking station including a first transmission part for at least transferring energy and configured for electrical communication with a voltage source associated with the docking station; and

a robot configured for movement over the surface and automatically docking with the docking station in a docking engagement, the robot including a movement system, a second transmission part, and a control system in electrical communication with the second transmission part, the second transmission part configured for at least receiving energy from the first transmission part when the first transmission part is in electrical contact with the second transmission part when the robot is docked in the docking station, and the docking station verifies that a docking engagement is achieved when the first transmission part and the second transmission part are in at least a substantially horizontal alignment and the control system is configured for detecting detects passing of at least a threshold voltage from the docking station as received through the second transmission part.

38. (Currently Amended) The docking system of claim 37, wherein the second transmission part includes a plurality of docking contacts extending laterally outward from the robot.

39. (Previously Presented) The docking system of claim 38, wherein the plurality of docking contacts includes two docking contacts.

40. (Currently Amended) The docking system of claim 39, wherein the two docking contacts receive voltage through from which the threshold voltage is determined.

41. (Original) The docking system of claim 37, wherein the first transmission part includes a receptor mechanism including electrically conductive arms for contacting the second transmission part to facilitate the passage of energy therethrough.

42. (Original) The docking system of claim 41, wherein energy includes electricity for charging a power supply of the robot.

43. (Original) The docking system of claim 41, wherein the second transmission part is magnetic and the electrically conductive arms are of a magnetically attractive material.

44. (Original) The docking system of claim 37, wherein the first transmission part and the second transmission part are configured for transferring and receiving signals therebetween.

45. (Currently Amended) A docking system comprising:

a docking station for location on a surface, the docking station configured for accommodating a robot in at least a docking engagement, the docking station including a first transmission part for at least facilitating the flow of charging current and the transmission and reception of signals and configured for electrical communication with a voltage source associated with the docking station; and

a robot configured for movement over the surface and automatically docking with the docking station in a docking engagement, the robot including a movement system and a second transmission part, and a control system in electrical communication with the second transmission part, the second transmission part configured for at least facilitating the flow of charging current and the transmission and reception of signals to and from the first transmission part, when the first transmission part is in electrical contact with the second transmission part when the robot is docked in the docking station, and the docking station verifies that a docking engagement is achieved when the first transmission part and the second transmission part are in at least a substantially horizontal alignment, and the control system configured for detecting at least a threshold voltage from the docking

station as received through the second transmission part.

46. (Currently Amended) The docking system of claim 45, wherein the second transmission part includes a plurality of docking contacts extending laterally outward from the robot.

47. (Currently Amended) The docking system of claim 46, wherein the plurality of docking contact contacts includes two docking contacts.

48. (Currently Amended) A method for docking a robot comprising:
responding to a signal in a wire defining a boundary;
automatically moving to a docking station by traveling along at least a portion of the wire;
attempting to cause a docking engagement with the docking station, the docking station including a first transmission part, by moving a second transmission part on the robot into electrical contact with the first transmission part; and,
determining if the electrical contact is at least at a predetermined voltage energy threshold level; and
verifying docking engagement when the predetermined voltage threshold level has been reached.

49. (Currently Amended) The method of claim 48, wherein if the electrical contact is at least at the predetermined voltage energy threshold level, transmitting energy from the docking station to the robot, through the first and second transmission parts.

50. (Currently Amended) The method of claim 48, wherein transmitting energy from the docking station to the robot includes transmitting electricity from the docking station to a power supply of the robot, to charge the power supply, through the electrical contact of the first and second transmission parts.

51. (Currently Amended) The method of claim 48, wherein if the electrical contact is not at the predetermined voltage energy threshold level or an electrical contact is not made, moving the robot out of the docking station and attempting to cause a docking

engagement between the robot and the docking station.

52. (Previously Presented) The method of claim 50, additionally comprising: signaling the robot to resume operation when the power supply of the robot is charged to a predetermined power level.

53. (Original) The method of claim 48, wherein the second transmission part includes at least one docking contact extending from the robot.

54. (Original) The method of claim 53, wherein the at least one docking contact includes two docking contacts.

55. (Original) The method of claim 48, wherein the first transmission part includes a receptor mechanism including electrically conductive arms for contacting the second transmission part to facilitate the passage of energy therethrough.

56. – 61. (Canceled)

62. (Currently Amended) The method of claim 49, wherein the predetermined voltage energy threshold level includes a predetermined voltage level.